

itself which have an average particle diameter of 9  $\mu\text{m}$  or less and a scraped weight of 16 mg., when the surface layer is scraped by a cleaning member under an abutment pressure of from 20-80 gf/cm for a surface layer length of  $1 \times 10^6$  mm.

It is clear that there is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in itself, render a claim improper. See M.P.E.P. §2173.05(g). There is nothing intrinsically wrong in defining something by what it does, but rather than what it is. In re Hallman (CCPA 1981), 210 U.S.P.Q. 609. A claim is not indefinite merely because it is functional. In re Miller (CCPA 1971), 169 U.S.P.Q. 597; even when it is functional at the point of novelty, Ex parte Roggenburk (POBA 1970), 172 U.S.P.Q. 82.

Therefore, defining the surface layer by its property of producing scraped particles at specific abutment pressures, wherein the particles have a specific particle diameter and weight, is proper.

Previous claims 1 and 5 were rejected as anticipated by Oshiba '085. The Examiner considers the toner as the "scraped particle" from the surface of the photosensitive member. The Examiner also notes that

fluororesin fine particles in the surface layer appear to be inherently removed by the cleaning blade.

Claims 1 and 5 were rejected as anticipated by Okado '702. The Examiner considers the residual toner to be the scraped particle. In addition, the Examiner notes fluorine-resin fine particles in the surface layer are removed by the cleaning blade.

Claims 1-6 were also rejected as obvious over Oshiba '085 in view of Hanami '099. The Examiner cites Hanami for incorporating a combination of resins in the surface layer. While grounds of rejection as previously advanced have been rendered moot by the present amendments, nonetheless, Applicants will review briefly the present claimed invention and how it distinguishes from the art of record.

As noted above, the present invention includes a photosensitive member or a unit which includes an image-bearing member and a cleaning member, wherein the surface of the photosensitive member, when scraped by a cleaning member with specific abutment pressure for a surface layer length of  $1 \times 10^6$  mm produces scraped surface particles having an average particle diameter of  $9 \mu\text{m}$  or less and a weight of the scraped particles of at least 16 mg.

On specification page 15, lines 2-10 it is disclosed that the cleaning blade is urged against the photosensitive drum without development. The scraped particles of the photosensitive layer were accumulated in the cleaning container and the particle size distribution and the scraped weight of the photosensitive layer's scrapings were measured. Where there is no developing, no residual toner is present to be scraped.

On specification page 25, lines 10-17 it is disclosed that it is the photosensitive layer which is scraped to produce the scraped particles and such scraping polishes the surface of the photosensitive layer.

Accordingly, it is clear that the scraped particles do not consist of toner or residual toner, but consist of particles of the photosensitive layer actually scraped from the surface of the photosensitive layer when no toner is present.

The Examiner's attention is directed to the results illustrated in Figs. 1A and 1B, as well as in Comparative Examples 1, 2, 5, 6, 8 and 9 as illustrated in Fig. 5. From the results, it is noted that acceptable images free from image flow and streak are produced when the scraped particles have an average particle diameter of 9  $\mu\text{m}$  or less and a

scraped weight of at least 16 mg when the surface layer is scraped by a cleaning member under specific abutment pressure for a surface layer length of  $1 \times 10^6$  mm. When the average particle diameter exceeded about  $9 \mu\text{m}$  as in Comparative Examples 1, 2, 8 and 9, then problems with image flow and image streak occurred. In addition, when a scraped weight was less than 16 mg as in Comparative Examples 5 and 6, then, likewise, problems occurred with image flow. The results in Figs. 1A and 1B are illustrative of such results.

Neither Oshiba '085 or Okado '702 disclose a surface layer of a photosensitive member which has the property that when scraped particles of the surface layer are collected when the surface layer is scraped by a cleaning member under specific abutment pressure for a length of  $1 \times 10^6$  mm, that the scraped particles have an average particle diameter of  $9 \mu\text{m}$  or less and a weight of at least 16 mg.

Clearly, the present claims do not include residual toner particles as scraped particles, since they have nothing to do with the property of the surface layer per se. Further, even if fluororesin fines are deemed to be removed by a cleaning blade, there is no disclosure or suggestion that the surface layer should have a property, such that the scraped particles have a specific average particle diameter

and weight when the layer is scraped by a member having a specific abutment pressure for a specific surface length.

Further, the comparative test results of record show that to prevent streaked images and image flow (smeared images) the surface layer, when scraped, should produce scraped particles having a specific diameter and weight under specific scraping conditions.

Accordingly, it is submitted that none of the references disclose the properties of the scraped particles or describe a surface layer with such properties. Accordingly, the anticipation rejection must fail.


Further, the fact that fluoro-resin fines may be removed during cleaning, does not provide sufficient basis for anticipation. There is nothing to show that any fines when collected inherently have any specific properties. Certainly, there is nothing to show that the surface layer must have a specific property in order to resist image flow and streaked images.

Therefore, it is respectfully requested that the claims be allowed and that the case be passed to issue.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All

correspondence should continue to be directed to our below  
listed address.

Respectfully submitted,



Attorney for Applicants

Registration No. 24947

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200

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